IN THE CLAIMS

1. (Currently Amended) A motor housing for an electric motor ~~having~~ comprising a housing ~~shell~~ (10) which ~~encloses a~~ defines space (52) to accommodate the electric motor, and a flexible partition (50) ~~in the housing shell (10)~~ ; the flexible partition (50) ~~which is inserted~~ positioned between the housing ~~shell~~ (10) and ~~the~~ a housing cover (12) and ~~which defines~~ providing a pressure equalizing cavity ~~(54) between the housing cover (12) and the flexible partition (50)~~, whereby the pressure equalizing cavity (54) is connected to the outside environment via the housing cover (12).

2. (Currently Amended) ~~A~~ The motor housing according to claim 1, ~~characterized in that~~ wherein the flexible partition (50) is ~~formed by means of~~ a membrane.

3. (Currently Amended) ~~A~~The motor housing according to claim 1, ~~characterized in that~~ wherein at least two openings (56, 58) are formed in the housing cover (12) to connect the pressure equalizing cavity (54) to ~~the~~ an outside environment.

4. (Currently Amended) ~~A~~ The motor housing according to claim 3, ~~characterized in that~~ wherein the openings (56, 58) are ~~formed by means of~~ grooves or holes in the housing cover.

5. (Currently Amended) ~~A~~ The motor housing according to claim 1, ~~characterized in that~~ wherein the flexible partition (50) forms a seal between the housing shell (10) and the housing cover (12).

6. (Currently Amended) ~~A~~ The motor housing according to claim 1, ~~characterized in that~~ wherein the housing cover (12) features ~~some~~ means (60) for ~~of fixing and~~ guiding the flexible partition (50) when the partition (50) is distorted.

7. (Currently Amended) ~~A~~ The motor housing according to claim 1, ~~characterized in that~~ further comprising a cable duct (36) ~~is provided~~ disposed between the housing shell (10) and the housing cover (12~~) which holds leads (38, 40) for the purpose of connecting the electric motor and that the flexible partition (50) forms a seal between the cable duct (36) and the housing shell (10) and/or the housing cover (12)~~.

8. (Currently Amended) ~~A~~ The motor housing according to claim 1, ~~characterized in that~~ wherein the flexible partition (50) further comprises a semi-permeable membrane.

9. (Currently Amended) An electric motor having a stator (16) and a rotor (22) which is enclosed in a motor housing (10) according to claim 1.

10. (New) The motor housing according to claim 7, wherein the cable duct holds ~~leas~~ leads (38, 40) for ~~the purpose of~~ connecting the electric motor and that the flexible partition (50) forms a seal between the cable duct (36) and the housing shell (10) and/or the housing cover (12).

11. (New) The motor housing according to claim 7, wherein the flexible partition (50) forms a seal between the cable duct (36) and at least one of the housing shell (10) or the housing cover (12).

12. (New) A motor housing comprising a first chamber for receiving an electromagnetic rotor and a second chamber for compensating for the temperature changes between the inside of the motor and ambient, wherein the second chamber communicates with the ambient.

13. (New) The motor housing of claim 12, wherein the first chamber and the second chamber are separated by a flexible membrane.

14. (New) The motor housing of claim 13, wherein the flexible membrane is an elastomer.

15. (New) The motor housing of claim 12, wherein the first chamber is substantially sealed from the ambient.

16. (New) The motor housing of claim 12, wherein the flexible portion is clamped between the first and the second chambers.

17. (New) The motor housing of claim 12, wherein the second chamber further comprises at least one opening, the opening providing fluid communication between the second chamber and the ambient.

18. (New) The motor housing of claim 12, wherein the second chamber further comprises a guide means for addressing distortion in the flexible membrane.

19. (New) A housing assembly for an electromagnetic motor comprising:

a chamber for receiving a rotor;

a flexible membrane dividing the chamber to a first portion and a second portion, the first portion hermitically sealed from an ambient pressure and the second chamber in pressure communication with the ambient;

the flexible membrane elastically expanding in response to a temperature change within the first portion.

20. (New) The hosing assembly of claim 19, further comprising a guide for restoring the flexible membrane after expansion.

21. (New) An electromagnetic motor comprising a housing, a rotor and a stator coupled to the housing;

the housing having a membrane defining a first section and a second section, the first section hermetically sealing the rotor and the stator from an ambient and the second section in fluid communication with the ambient;

the housing having a guide adapted to relate the membrane to an original shape.

22. (New) The electromagnetic motor of claim 21, wherein the membrane expansively deflects in response to a change of temperature in the first section of the housing.

23. (New) The electromagnetic motor of claim 22, wherein the guide restores the flexible membrane after expansion.

24. (New) The electromagnetic motor of claim 21, wherein the membrane is interposed between the fist and the second sections.

25. (New) The electromagnetic motor of claim 21, wherein the membrane sealingly adjoins the first and the second sections.

26. (New) A method of compensating for temperature changes within an electric motor comprising:

providing a housing for receiving a rotor and a stator;

hermetically sealing at least one of the rotor and the stator within a chamber, the chamber having a flexible membrane;

coupling a hub to at least partially cover of the flexible membrane, the hub providing means to communicate pressure with an ambient environment and having a guide for reflecting the flexible membrane in a direction responsive to a change in temperature of the chamber.

27. (New) The method of claim 26, wherein the membrane is an elastomer.

28. (New) The method of claim 26, further comprising the step of providing means to communicate electricity to the housing.